







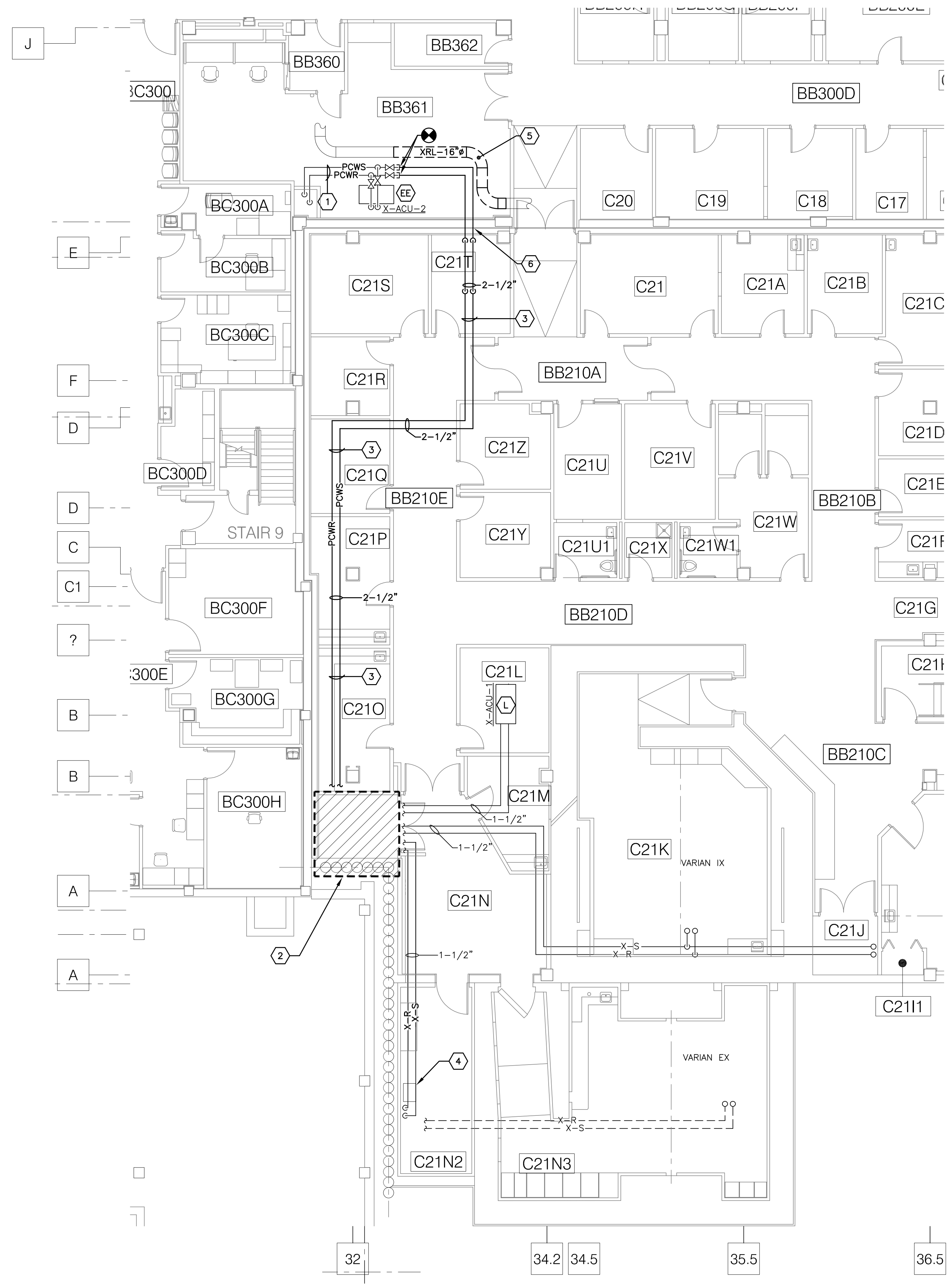








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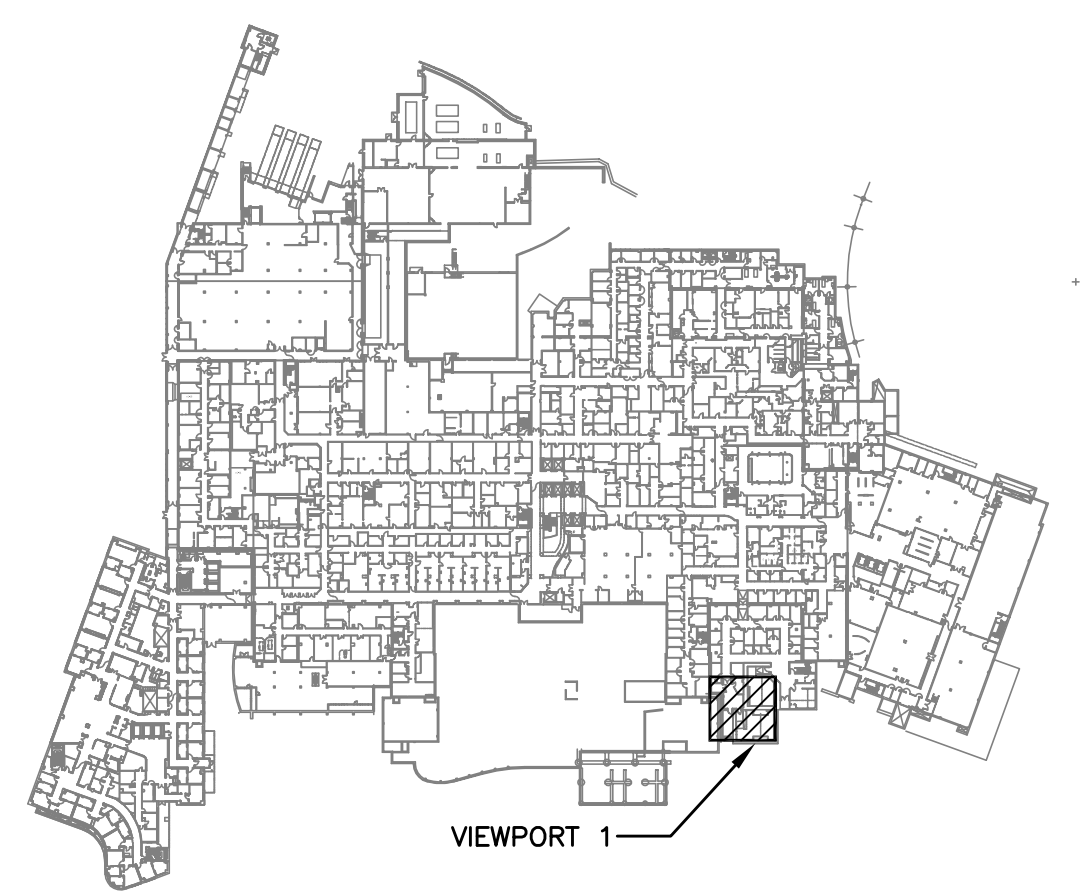


BASEMENT PROCESS CHILLED  
WATER PIPING PLAN  
SCALE: 1/8" = 1'0"  
1

- CODED NOTES:**
- 1 RE-LABEL ALL CHILLED WATER PIPING UPSTREAM OF POINT OF CONNECTION FOR PROCESS CHILLED WATER SERVICE.
  - 2 REFER TO DRAWING 1-M7D FOR DEMOLITION AND NEW WORK IN OUTLINED AREA.
  - 3 FIELD VERIFY EXACT ROUTE OF NEW PCWS/R PIPING. PROVIDE ANY AND ALL OFFSETS AS REQUIRED TO COMPLETE ROUTE. CONTRACTOR SHALL REMOVE/RE-INSTALL CEILING TILE AND GRID AS REQUIRED FOR INSTALLATION OF PIPING. CONTRACTOR SHALL PERFORM WORK DURING UNOCCUPIED HOURS.
  - 4 EXISTING LINEAR ACCELERATOR PIPE CABINET (FILTRINE) TO REMAIN.
  - 5 REMOVE AND RELOCATE 16" EXHAUST DUCT AS REQUIRED TO PERMIT INSTALLATION OF 2-1/2" PCWS/R PIPING. PROVIDE ADDITIONAL DUCTWORK, FITTINGS, ETC. AS REQUIRED. WORK WILL REQUIRE AN EXHAUST SYSTEM SHUTDOWN TO THE PROSTHETICS LAB. COORDINATE SHUTDOWN WITH DEPARTMENT AND VA. COORDINATE FAN LOCATION WITH VA.
  - 6 CORE DRILL, SLEEVE, AND FIRESTOP PIPE PENETRATIONS OF WALL.

**GENERAL NOTES:**

A. WORK ON THIS DRAWING SHALL BE COMPLETED DURING NORMALLY UNOCCUPIED HOURS. COORDINATE WITH VA COR.



BASEMENT KEY PLAN  
NOT TO SCALE  
2

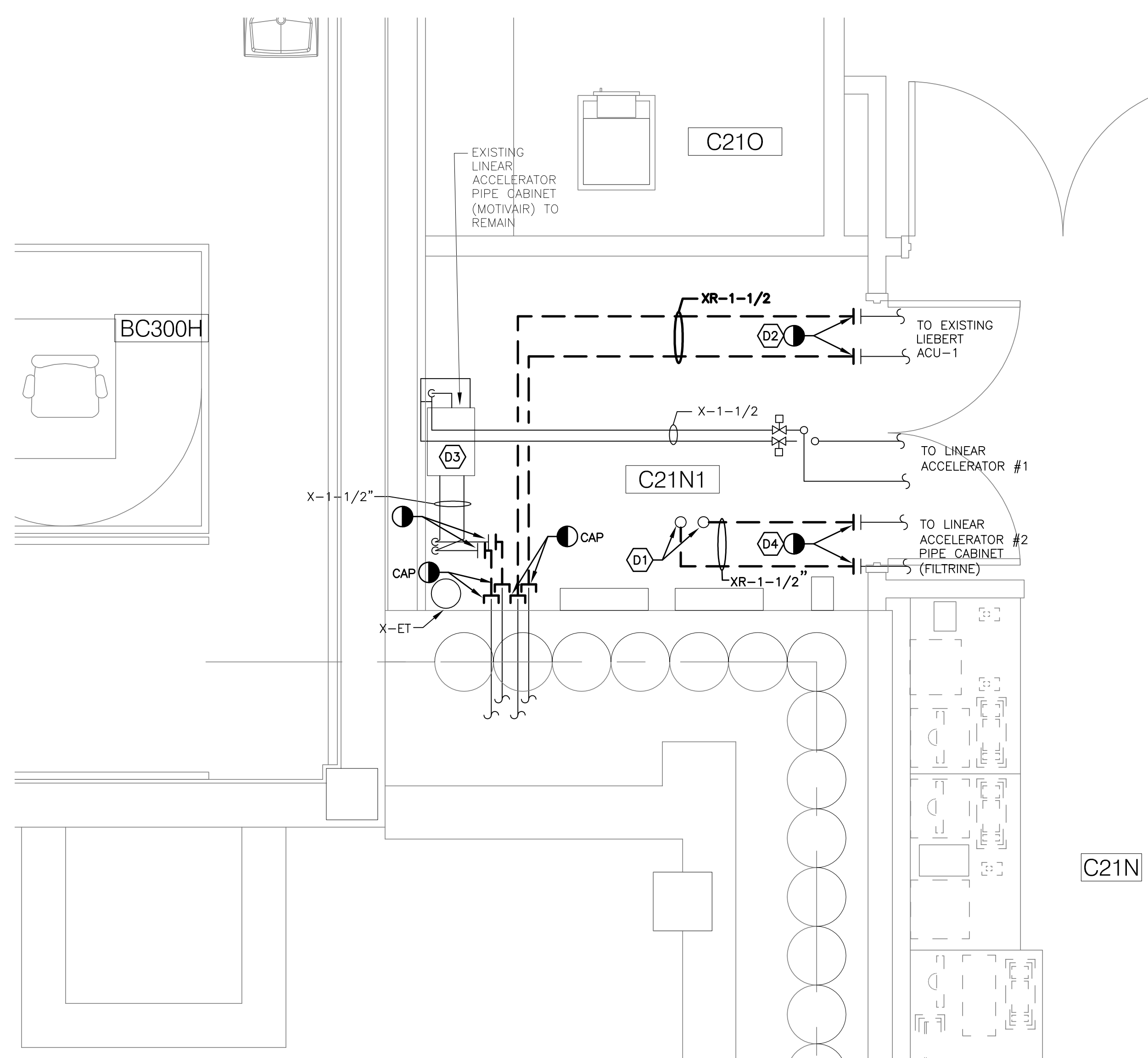
FOR CONSTRUCTION

FULLY SPRINKLERED

Final Construction Documents	04-03-15	<b>CONSULTANTS:</b>		<b>ARCHITECT/ENGINEER:</b>  FREDRICK, FREDRICK & HELLER ENGINEERS, INC. 672 EAST ROYALTON ROAD BROADVIEW HTS., OHIO 44147 TEL: (440) 546-9888 FAX: (440) 546-9899	Drawing Title <b>PARTIAL BASEMENT PROCESS CHILLED WATER PIPING PLANS</b>	Project Title <b>PROVIDE PROCESS LOOP TIE-INS</b>	Project Number 541-15-203	<b>Office of Facilities Management</b>  Department of Veterans Affairs	
					Approved: Project Director	Location <b>VAMC - WADE PARK</b>	Building Number 1		
					Date 04-03-15	Checked LDH	Drawn LDH		Drawing Number <b>1-M7C</b>
									Dwg. of
<b>Revisions:</b>	<b>Date</b>								

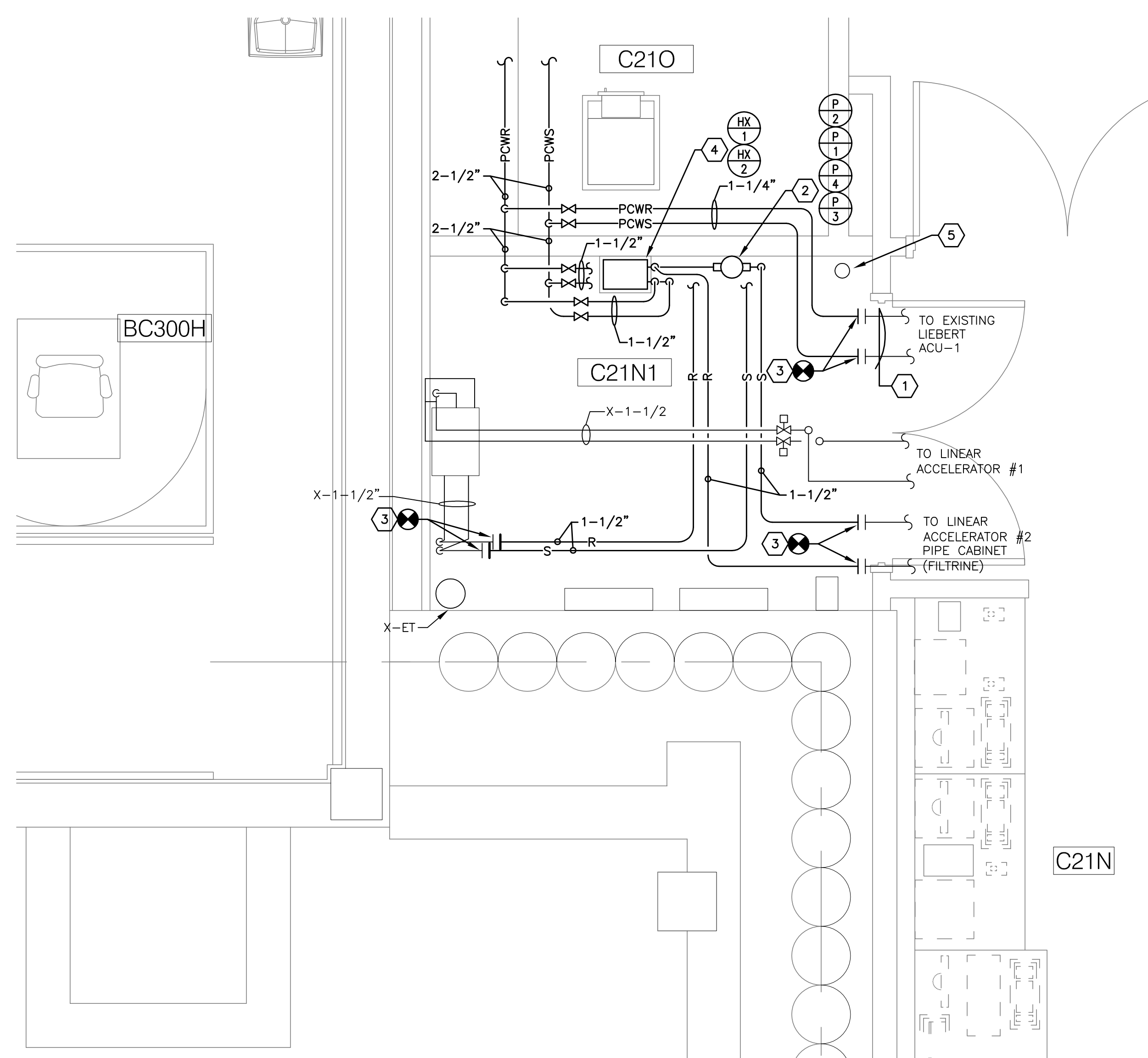


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PARTIAL BASEMENT MECHANICAL DEMOLITION PLAN  
SCALE: 1/2" = 10'  
1

- DEMOLITION CODED NOTES:
- D1 REMOVE EXISTING CHILLED WATER PIPING TO DECK. DRAIN ABANDONED LINES COMPLETELY AND CAP AND FIRESTOP LINES AT DECK.
  - D2 REMOVE CHILLED WATER LINES TO POINT INDICATED. CLEAN AND FLUSH EXISTING LINES SERVING LIEBERT UNIT. PROVIDE TEMPORARY COOLING, AS NEEDED, TO COMPUTER ROOM SERVED BY LIEBERT UNIT, ACU-1.
  - D3 SWITCH MOTIVAIR PIPE CABINET TO DOMESTIC WATER BACK-UP PRIOR TO START OF DEMOLITION WORK. COORDINATE SCHEDULING WITH VA COR AND USER GROUP.
  - D4 REMOVE EXISTING CHILLED WATER PIPING SERVING FILTRINE PIPE CABINET TO POINT INDICATED. SWITCH FILTRINE CABINET TO DOMESTIC WATER BACK-UP PRIOR TO START OF DEMOLITION WORK. COORDINATE SCHEDULING WITH VA COR AND USER GROUP.

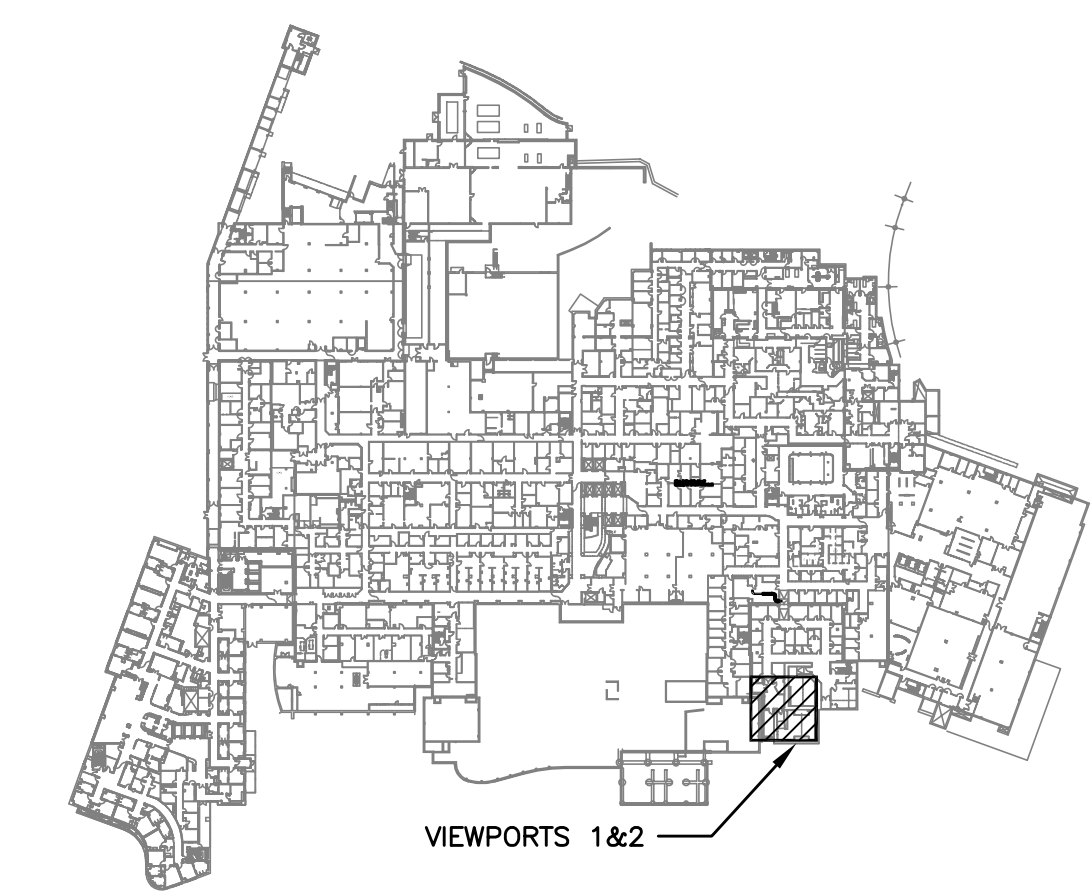


PARTIAL BASEMENT PROCESS CHILLED WATER PIPING PLAN  
SCALE: 1/2" = 10'  
2

- CODED NOTES:
- 1 RELABEL PIPING DOWNSTREAM OF POINT OF CONNECTION FOR PCWS/R SERVICE.
  - 2 RACK PUMPS TO WALL WITH FLOOR AND WALL MOUNTED ANGLE IRON FRAME. 4 PUMPS SHALL BE STACKED. PROVIDE PUMP CRADLE AND VIBRATION ISOLATION.
  - 3 FIELD VERIFY WHICH LINES ARE SUPPLY AND RETURN PRIOR TO CONNECTION.
  - 4 MOUNT BOTTOM HEAT EXCHANGER, HX-2, ON CONCRETE PAD. HEAT EXCHANGER HX-1 SHALL BE MOUNTED ABOVE HX-2 WITH FLOOR AND WALL MOUNTED STEEL FRAME.
  - 5 REWORK EXISTING SANITARY STACK AND BRANCH PIPING WITHIN ROOM TO ACCOMMODATE NEW PIPING AND EQUIPMENT.

GENERAL NOTES:  
A. WORK ON THIS DRAWING SHALL BE COMPLETED DURING NORMALLY UNOCCUPIED HOURS. COORDINATE WITH VA COR.

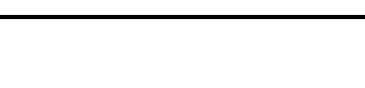


DEDUCT ALTERNATE NOTES  
AS PART OF DEDUCT ALTERNATE #1:  
A. DELETE ALL DEMOLITION AND NEW WORK TO LINEAR ACCELERATOR #2 CABINET.  
B. VALVE AND CAP 1-1/2" PCWS/PCWR LINES FOR FUTURE. REFERENCE "LINEAR ACCELERATOR PROCESS CHILLED WATER PIPING DETAIL" ON DWG 1-M4 FOR ADDITIONAL INFORMATION.



BASEMENT KEY PLAN  
NOT TO SCALE  
3

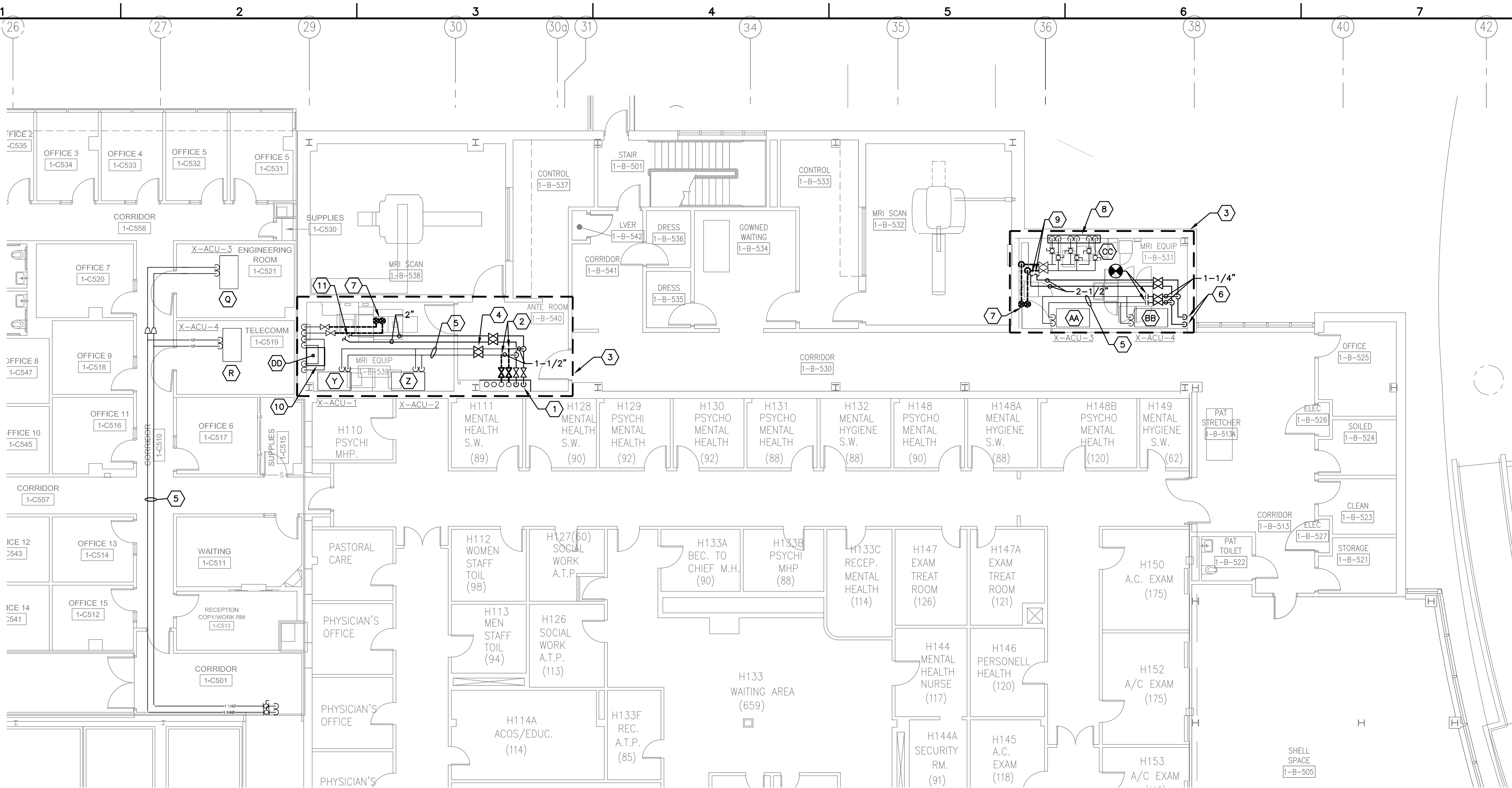
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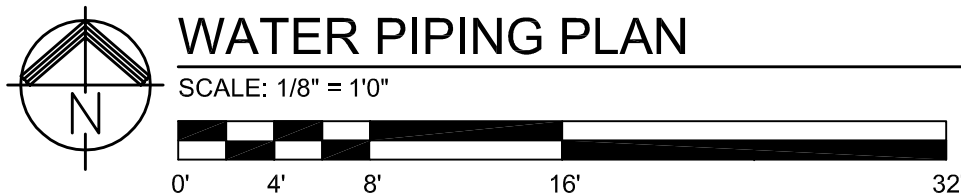
Final Construction Documents		04-03-15	<b>CONSULTANTS:</b>		<b>ARCHITECT/ENGINEER:</b>   <b>FREDRICK, FREDRICK &amp; HELLER</b> ENGINEERS, INC. 672 EAST ROYALTON ROAD BROADVIEW HTS., OHIO 44147 TEL: (440) 546-9888 FAX: (440) 546-9899	Drawing Title <b>ENLARGED MECHANICAL ROOM CHILLED WATER PIPING PLANS</b>		Project Title <b>PROVIDE PROCESS LOOP TIE-INS</b>		Project Number 541-15-203		<b>Office of Facilities Management</b>   <b>Department of Veterans Affairs</b>		
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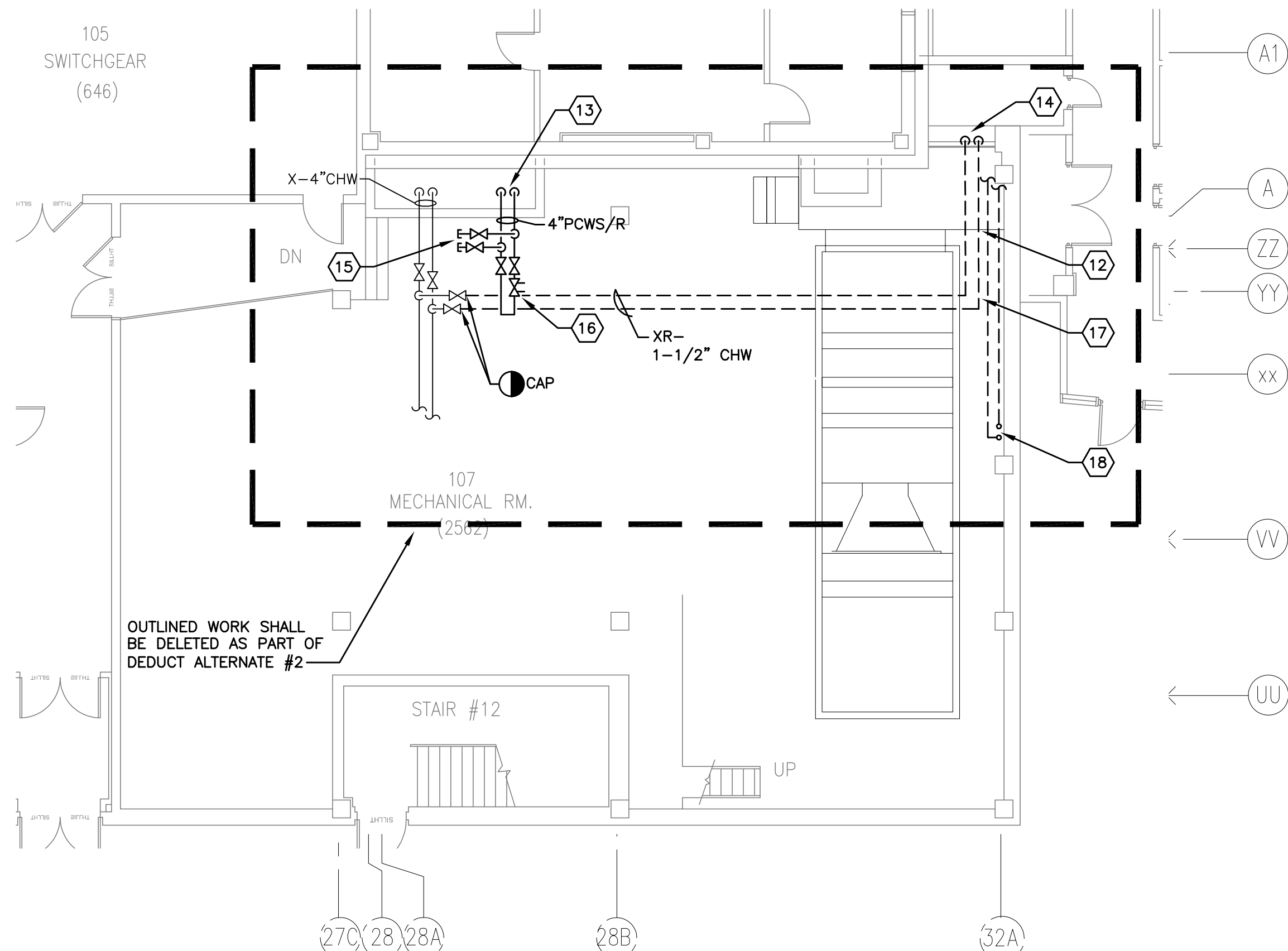
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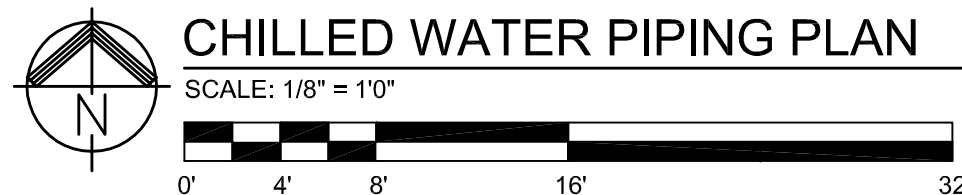
PARTIAL FIRST FLOOR PROCESS CHILLED WATER PIPING PLAN



1



PARTIAL FIRST FLOOR PROCESS CHILLED WATER PIPING PLAN



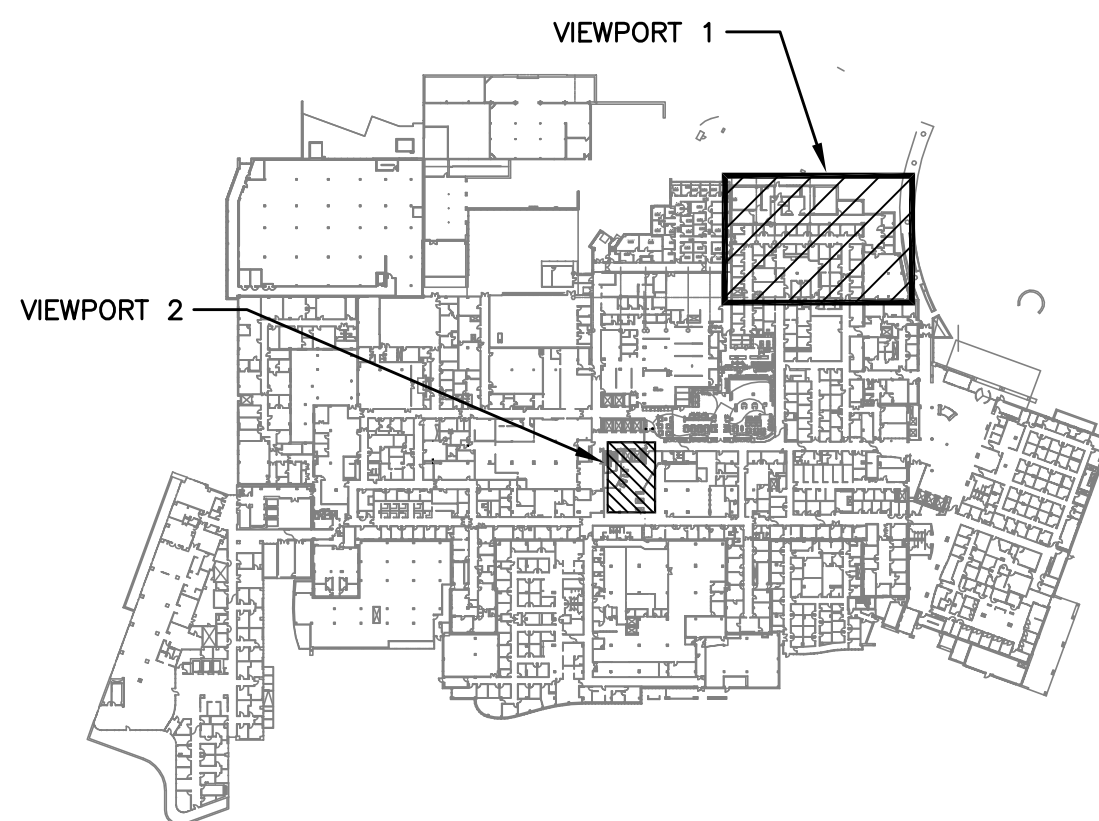
2

CODED NOTES:

- 2-1/2" PCWS/R DOWN TO BASEMENT. CORE DRILL AND FIRESTOP PENETRATION. REFER TO PENETRATION DETAIL. FUR OUT EXISTING CHASE IN ORDER TO ENCLOSE NEW PIPING. PROVIDE FINISH TO MATCH EXISTING.
- CONNECT NEW 1-1/2" PCWS/R BRANCH PIPES TO EXISTING CHWS/R BRANCHES SERVING AC UNITS. CAP CHWS/R BRANCH LINES BACK AT MAIN. PROVIDE INSULATED CAP.
- REMOVE AND REPLACE EXISTING CEILING AS REQUIRED TO INSTALL PIPING.
- PROVIDE NEW SHUTOFF VALVES IN BRANCH LINES SERVING AC UNITS.
- RE-LABEL EXISTING PIPING FOR PROCESS CHILLED WATER SERVICE.
- 2-1/2" PCWS/R DOWN THROUGH RAISED FLOOR AND FIRST FLOOR SLAB. REMOVE EXISTING CHWS/R PIPING ROUTED ALONG PATH AND REPLACE WITH NEW 2-1/2". CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.
- REMOVE EXISTING CHILLED WATER PIPING FROM MAIN PIPE MANIFOLD VALVES BACK UP THROUGH ROOF TO EXISTING CHILLER. FIELD VERIFY EXISTING CONDITIONS.
- EXISTING PHILIPS PIPE MANIFOLD. PRIOR TO START OF DEMOLITION, PIPE MANIFOLD SHALL BE VALVED INTO EMERGENCY DOMESTIC WATER BACK-UP.
- CONNECT NEW 2-1/2" PCWS/R TO EXISTING PHILIPS MRI EQUIPMENT PIPE MANIFOLD UPSTREAM OF MAIN MANIFOLD VALVES. FIELD VERIFY EXISTING CONDITIONS. PIPING SHALL BE FULLY CLEANED AND FLUSHED PRIOR TO RE-FILL. PROVIDE TEMPERATURE GAUGES AND PETE'S PLUGS ON THE SUPPLY AND RETURN LINES FEEDING NEW HEAT EXCHANGER PACKAGE. MOUNT GAUGES AND PORTS IN MAINS BELOW CEILING LEVEL.
- EXISTING DRAKE HEAT EXCHANGER MODULE TO BE REMOVED. CONTRACTOR SHALL PROVIDE REPLACEMENT WATER-TO-WATER HEAT EXCHANGER PACKAGE (DRAKE MODEL D500-871). REFER TO GENERAL NOTES, THIS DRAWING, FOR ADDITIONAL INFORMATION. FIELD VERIFY EXISTING CONDITIONS IN ORDER TO DETERMINE COURSE OF ACTION FOR REPLACEMENT HEAT EXCHANGER PACKAGE. PROVIDE TEMPERATURE GAUGES AND PETE'S PLUGS ON THE SUPPLY AND RETURN LINES FEEDING NEW HEAT EXCHANGER PACKAGE. MOUNT GAUGES AND PORTS IN MAINS BELOW CEILING LEVEL.
- CONNECT NEW 2" PCWS/R TO EXISTING TOSHIBA MRI CHILLED WATER VALVES UPSTREAM OF HEAT EXCHANGER. FIELD VERIFY EXISTING CONDITIONS.
- CAP PLENUM AT PENETRATIONS WITH 2-INCH THICK, INSULATED PANEL. CAP WEATHERTIGHT.
- 4" PCWS/R DOWN THROUGH PIPE CHASE TO SUB-BASEMENT. REFER TO PARTIAL SUB-BASEMENT PLAN, DWG 1-M8A FOR CONTINUATION. PIPE CHASE IS CONGESTED. CONTRACTOR SHALL FABRICATE PIPE AND INSULATION AS REQUIRED TO INSTALL PIPING. MOVE EXISTING PIPE AND HANGERS AND REMOVE AND REPLACE WALLS OF CHASE TO FACILITATE THE INSTALLATION OF THE NEW PIPING.
- REMOVE EXISTING CHILLED WATER LINES THROUGH INTAKE PLENUM AND INTAKE SHAFT. CAP LINES AT SLAB PENETRATIONS WATERTIGHT.
- 2" PCWS/R VALVED AND CAPPED FOR FUTURE.
- 4" PCWS/R VALVES FOR FUTURE. PROVIDE BALANCE VALVE FOR RECIRCULATION. BALANCE TO 3 GPM.
- REMOVE EXISTING 1-1/2" CHWS/R PIPING FROM MECH RM 107 DOWN TO BASEMENT LEVEL. FIELD VERIFY EXISTING CONDITIONS.
- REMOVE EXISTING CHWS/R FROM ROOFTOP CHILLER (MOTIVAIR) DOWN TO BASEMENT LEVEL. REMOVE PIPING COMPLETELY BACK TO ROOF-MOUNTED CHILLER. REFER TO ROOF PLAN, DRAWING 1-M10 FOR CONTINUATION.

GENERAL NOTES:

- CONTRACTOR SHALL CLOSELY COORDINATE SHUTDOWNS WITH VA COR AND RADIOLOGY STAFF.
- MRI SHUTDOWNS SHALL BE KEPT TO AN ABSOLUTE MINIMUM. COORDINATE CLOSELY SYSTEM DOWNTIME CAPABILITIES WITH VA COR, RADIOLOGY STAFF, AND TOSHIBA AND PHILIPS MRI VENDOR REPRESENTATIVES. WHERE POSSIBLE TO PROVIDE DOMESTIC WATER BACK-UP DURING CONSTRUCTION, CONTRACTOR SHALL COORDINATE THIS WORK WITH RADIOLOGY STAFF AND VENDOR.
- NEW WATER-TO-WATER HEAT EXCHANGER SHALL BE DRAKE, MODEL D500-871. NEW HEAT EXCHANGER PACKAGE SHALL BE 460V/3PH/60HZ AND SHALL BE FULLY EQUIPPED WITH THE FOLLOWING:
  - CHILLED WATER CONTROL VALVE
  - WATER-TO-WATER HEAT EXCHANGER
  - BYPASS RELIEF VALVE
  - 2 HP CIRCULATION PUMP
  - HOSE BIBB CONNECTIONS
  - PRESSURE RELIEF VALVE
  - FLOW SWITCH
  - THERMOSTAT
  - HIGH LIMIT THERMOSTAT
  - DIGITAL OUTLET TEMPERATURE INDICATORALL PIPING SHALL BE FULLY INSULATED PER SPECIFICATIONS. PIPING SHALL BE FLUSHED AND FILLED PER SPECIFICATIONS. FILL EQUIPMENT SIDE WITH REQUIRED WATER TYPE (REFER TO RADIOLOGY STAFF).



FIRST FLOOR KEY PLAN

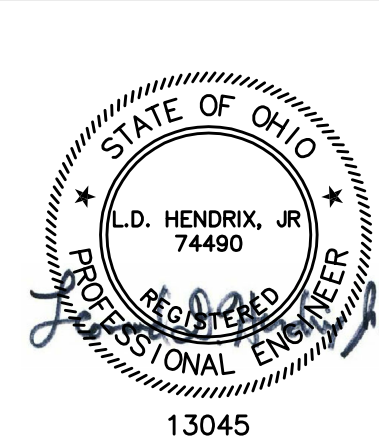
NOT TO SCALE

3

FOR CONSTRUCTION

Final Construction Documents	04-03-15
Revisions:	Date
1	

CONSULTANTS:



ARCHITECT/ENGINEER:



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Drawing Title  
**PARTIAL FIRST FLOOR PROCESS CHILLED WATER PIPING PLANS**

Approved: Project Director

Project Title  
**PROVIDE PROCESS LOOP TIE-INS**

Location  
**VAMC - WADE PARK**

Date  
04-03-15

Checked  
**LDH**

Drawn  
**LDH**

Project Number  
541-15-203

Building Number  
1

Drawing Number  
**1-M8**

Dwg. of

Office of  
**Facilities Management**

Department of  
Veterans Affairs